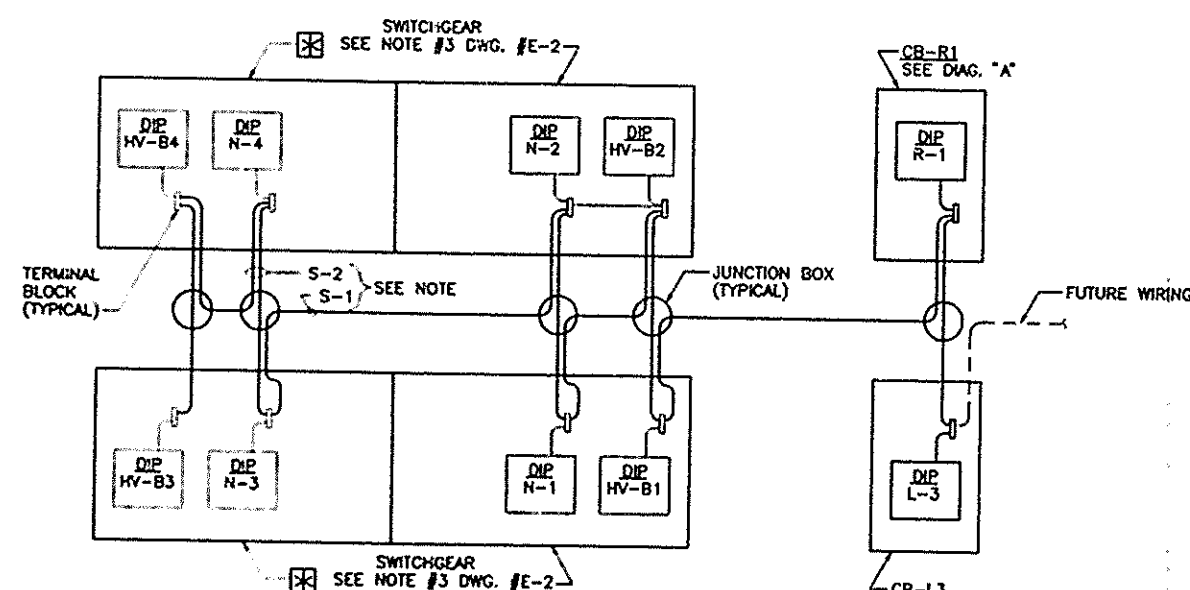


TYPICAL ONE LINE DIAGRAM - U.P.S. CONTROL POWER

SUBSTATIONS SS-75N & SS-75S SHOW: ABOVE
(OTHER SUBSTATIONS SIMILAR)



SCADA COMMUNICATIONS WIRING DIAGRAM

TYPICAL FOR EACH SUBSTATION

NOTES

SCADA COMMUNICATION WIRING SHALL BE
22 GAUGE SHIELDED TWISTED PAIR.
BELDEN #8761 OR APPROVED EQUAL.

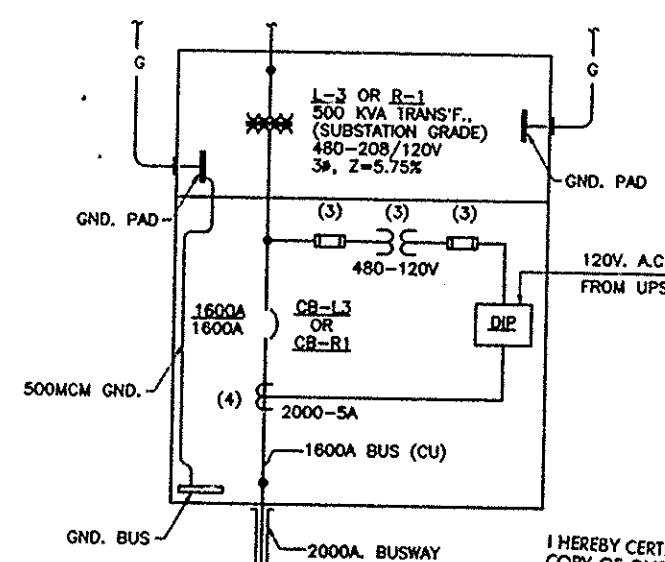


DIAGRAM "A"

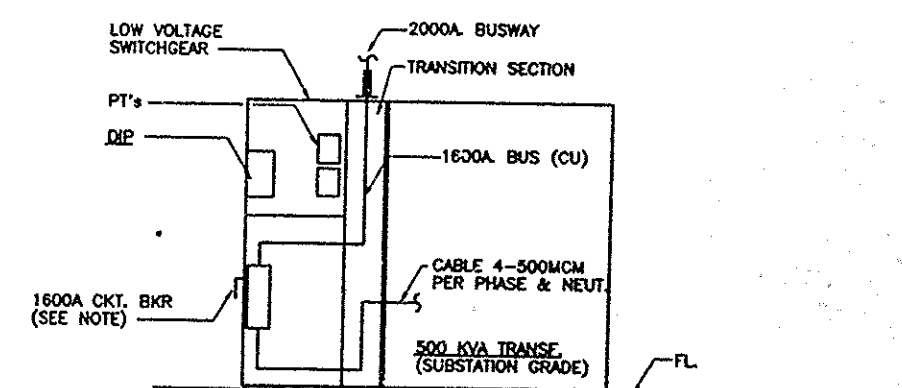
(TYPICAL)

I HEREBY CERTIFY THAT THIS IS A TRUE AND CORRECT COPY OF ONE OF THE CONTRACT DRAWINGS CONSTITUTING A PART OF CONTRACT NO. HTC-802.071 IN THE FORM IN WHICH SAID DRAWINGS EXISTED AT THE TIME THE SAID CONTRACT WAS EXECUTED BY THE PARTIES.

DATE 6/21/95 Sullivan A. Aslan
DATE 8/15/95 Peter J. [illegible] SPEC WRITER

DE SPEC. WRITER

ENGINEER OF DESIGN



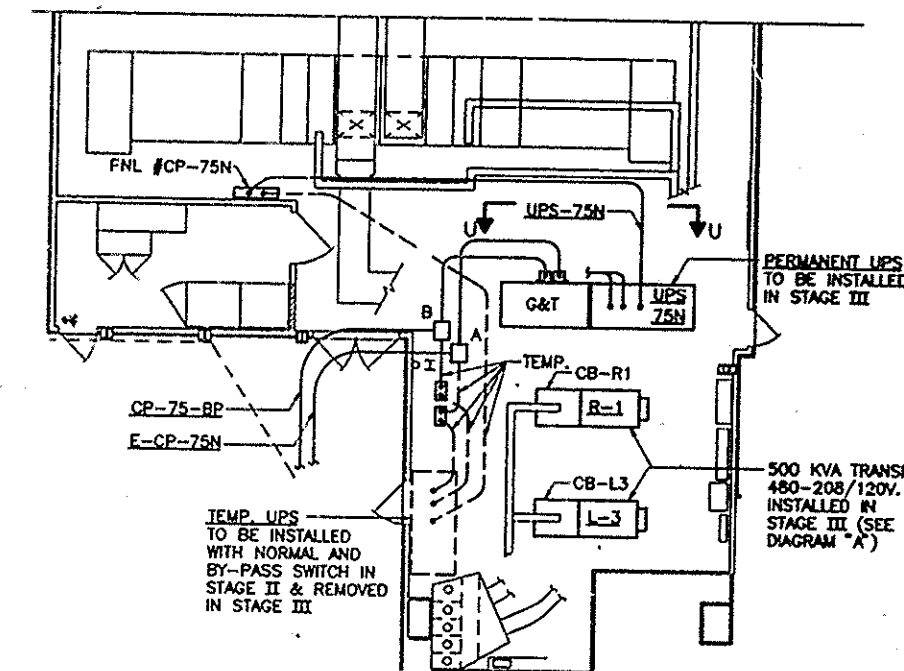
SIDE VIEW

500 KVA TRANSFORMER AND
SECONDARY CIRCUIT BREAKER
(TYPICAL)

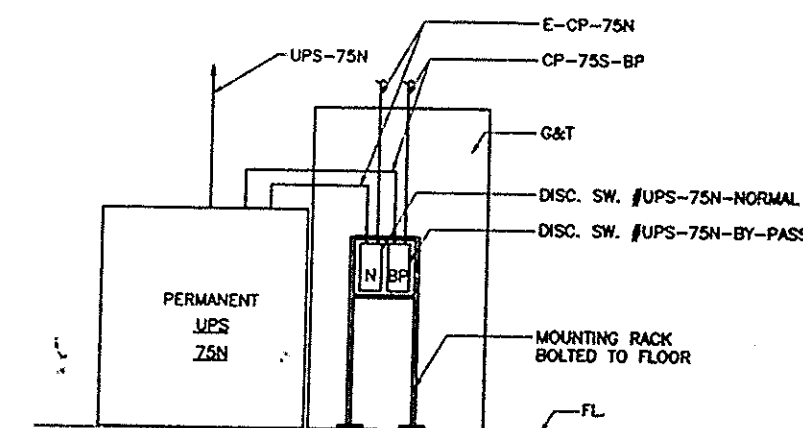
NOTES

CIRCUIT BREAKER SHALL BE 1600A., 3 POLE, 600 VOLT WITH 1600A. CURRENT SENSOR. BREAKER SHALL BE G.E. POWER BREAK CIRCUIT BREAKER WITH MICRO VERSA TRIP, CAT. #TP1616TT OR APPROVED EQUAL.

LOW VOLTAGE SWITCHGEAR, SEE SPEC. SECTION 16335.
SHALL BE REAR FEED FROM TRANSFORMER WITH TOP
INSTRUMENT COMPARTMENT COMPLETE WITH ALL EQUIPMENT
AS SHOWN IN DIAGRAM "A" & SIDE VIEW.



PART PLAN - 75th FLOOR (SS-75N)



SECTION U-U

N.T.S.

NOTE

1. - FOR LEGEND SEE DWG. #E-1.
2. - FOR GENERAL NOTES AND ABBREVIATIONS SEE DWG. #E-2.

Sheet **189** of **224**



**THE PORT AUTHORITY
OF NY & NJ**

Peter K. Sweeney
ENGINEERING PROGRAM MANAGER
WORLD TRADE CENTER

Dr. M. J. Sweeney
CHIEF ELECTRICAL ENGINEER

Engineering Department
Design Divisions

The World Trade Center Electrical/HVAC Upgrade Program

Title
TOWER ONE AND TWO
LOW VOLTAGE
SUBSTATIONS
CONSTRUCTION AND
INSTALLATION

ELECTRICAL

TYPICAL SUBSTATION STAGE II AND III CONTROL DIAGRAM & DETAILS

No.	Date	Revision	Approved
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This drawing subject to conditions in contract.
All inventions, ideas, designs and methods
herein are reserved to Port Authority and
may not be used without its written consent.

LEAHY/ FISCHER	LEAHY	A -
Designed by	Drawn by	Checked by

Date 5-1-85 Scale NONE

Contract Number	Drawing Number
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WTC 802.071 E-103